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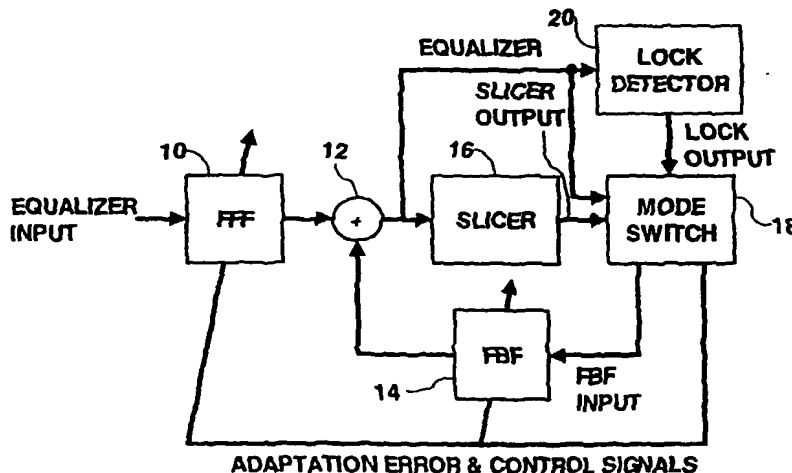
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**(54) Title: EQUALIZER MODE SWITCH**



**(57) Abstract:** An apparatus for automatically selecting one of a standard decision directed (dd) mode and a soft dd mode in a decision feedback equalizer (DFE) for receiving a data signal comprises an equalizer for providing a DFE output signal and having a control input responsive to a control signal exhibiting a first value for selecting the standard dd mode and a second value for selecting the soft dd mode. The equalizer includes a lock detector (20) having an output for providing a lock signal indicative of equalizer convergence. The apparatus includes a mode selector (18) having an input coupled to the lock detector (20) output and having an output coupled to the control input for providing an output signal exhibiting one of the first

and second values depending upon characteristics of the lock signal.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/11028

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H03H 7/40

US CL : 375/229, 230, 232, 233, 350; 708/300, 322, 323; 455/296, 307; 333/28R

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 375/229, 230, 232, 233, 350; 708/300, 322, 323; 455/296, 307; 333/28R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
BRS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,075,816 A (WERNER et al.) 13 June 2000. Abstract	1-29
A	US 5,524,023 A (TSUJIMOTO) 04 June 1996. Abstract	1-29

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
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"P"	document published prior to the international filing date but later than the priority date claimed		

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